herpes viruses, SARS, agents of bioterrorism including *Bacillus anthracis* (anthrax) and the smallpox virus, and nosocomial pathogens including MRSA. The lecture concludes with a futuristic view on evolving technology including miniaturized testing devices that can be used by patients to test for a variety of infectious disease pathogens. Additionally the importance of both bioinformatics (e.g, assessing the results of nucleic acid sequencing) and clinical informatics (e.g., combining multiple data points from clinical laboratory testing and physiological data for single patients) is stressed.

KS 12

ANTIMICROBIAL STEWARDSHIP PROGRAM IN HOSPITALS: TAIWAN EXPERIENCE

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Antimicrobial resistance has become a serious problem all over the world. According to a recent WHO report on surveillance, antimicrobial resistance has been a global health security threat that requires concerted cross-sectional action by governments and society as a whole. Due to the wider recognition of the adverse clinical, healthcare, and societal outcome associated with antimicrobial resistance, there has been an increased emphasis on the importance of rational and appropriate antimicrobial use, which can be achieved through antimicrobial stewardship. There are examples of antimicrobial stewardship programs (ASPs) from different parts of the world demonstrated the improved antimicrobial prescribing practice can reduce antimicrobial resistance or healthcare-associated infections and improve clinical outcomes. However, the extent to which interventions could be implemented into the hospital or healthcare system also varied.

In Taiwan, there has been several individual hospitals demonstrated successful program to control the antimicrobial usage in the past. In 2013, Taiwan CDC began to set up a national ASP. Initially, 7 hospitals were selected as demonstration centers and the exact contents of the ASP were discussed and set up by these hospitals and Taiwan CDC in 2013. They also selected practical indicators for collection from the hospitals to show the outcome of the ASP.

In 2014, 54 other hospitals voluntarily participated the ASP under the leading of the 7 demonstration centers. There will be more other hospitals participating the ASP in 2015. During past 2 years, the national ASP tried to integrate the leadership commitment, accountability of the leader physicians, participation of other healthcare professions, implementation of recommended actions, monitoring antibiotic prescribing and resistance patterns, regular reporting the antibiotic use, and educating clinicians and general population. With these, some improvements in laboratory reporting time, antimicrobial usage and reduced resistance in some bacteria were demonstrated. Details will be presented.

KS 13

PREVENTING CENTRAL LINE-ASSOCIATED BLOODSTREAM INFECTIONS IN AN ERA OF ZERO TOLERANCE

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Central line-associated bloodstream infections (CLA-BSIs) are a major cause of morbidity and mortality worldwide. Studies of the pathogenesis of CLA-BSIs have shown that extraluminal colonization is the route of early infections and intraluminal colonization is the route of later infections. Insertion and maintenance bundles have been developed to reduce the risk of such extraluminal and intraluminal contamination, respectively. Insertion bundles include: use of a checklist, hand hygiene, a catheter insertion kit/cart, maximum barrier precautions, a closed intravenous systems, chlorhexidine with alcohol for skin antisepsis, and avoiding femoral lines. Maintenance bundles have included use of the chlorhexidine-impregnated sponge dressing, the safest needleless connector, antiseptic or antimicrobial impregnated catheters, antimicrobial or antiseptic locks or flushes, chlorhexidine bathing of intensive care unit (ICU) patients, and scrub of the hub of the connector for 15-30 seconds with chlorhexidine or 70% alcohol. Use of such insertion and maintenance bundles have been associated with significant reductions in CLA-BSIs, including achieving a zero rate at some hospitals and a 58% reduction in CLA-BSIs in U.S. ICUs nationwide between 2001 and 2009. These data show that use of insertion and maintenance bundles can significantly reduce the risk of CLA-BSIs and should be fully implemented worldwide. In this presentation, the data leading to the recommendations of the elements of the insertion and maintenance bundles and the impact of the implementing such interventions will be discussed.

KS 14

NATIONAL APPROACH TO REDUCE HEALTHCARE-ASSOCIATED INFECTION

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In 2007, the Australian Commission on Safety and Quality in Health Care prioritised a number of national strategies to improve patient safety. One of the priorities was the National Healthcare Associated Infection (HAI) prevention program.

Despite a number of disparate activities there was a serious lack of standardised and strategic approaches to HAI surveillance and infection prevention across the country and few national activities in place. Barriers which required addressing before a sustained national program could take shape included the lack of a cohesive national voice on infection prevention, and the absence of a forum for discussion by state surveillance organisations;

The approach taken by the Commission was to address gaps identified though a comprehensive consultation with clinicians, learned societies and policy makers. The consultation laid the foundation for a number of committees that oversaw the development and implementation of key national projects. The first major task was to provide consensus recommendations, agreed to by experts, and endorsed by policy makers and health ministers.

This approach of bridging policy with practice has been one of the most successful strategies in establishing a national infection prevention program. The philosophy of the Australian HAI program has been to put good policy into practice and good practice into policy.

The projects to improve patient safety included the following key initiatives:

- the development of consensus definitions for national surveillance activities
- the development and implementation of national infection control guidelines
- promotion of standardized hand hygiene auditing and training
- building clinician capacity
- augmentation of antimicrobial stewardship

Strategies that supported improvement in patient safety included:

- establishing governance and management systems
- establishing multi-stakeholder advisory committees
- monitoring and public reporting
- implementation strategies based on the principles of quality improvement
- development of resources and educational programs
- teamwork and networking with clinicians and policy makers
- leadership and master classes

While the application of the national HAI programs set the stage for improvement, the key to ensuring implementation has been the mandatory accreditation process through the National Safety and Quality Health Service Standards (NSQHS) which now applies to every hospital, day procedure unit, and dental practice. The NSQHS are considered essential to improving the safety and quality of care for patients, and provide a clear statement about the level of care that can be expected from health services. The NSQHS